

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)							DATE February 2000		
BUDGET ACTIVITY				PE NUMBER AND TITLE				PROJECT	
05 - Engineering and Manufacturing Development				0604442F Space Based Infrared Systems (SBIRS)				654598	
				Low					
COST (\$ in Thousands)	FY 1999 Actual	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	Cost to Complete	Total Cost
654598 SBIRS Low Element EMD	36,627	225,566	241,021	306,530	617,662	763,362	486,840	513,647	3,191,255
Quantity of RDT&E Articles	0	0	0	0	0	0	0	3	3
<p>(U) <u>A. Mission Description</u></p> <p>(U) The Space-Based Infrared System's (SBIRS) primary mission is to provide initial warning of a ballistic missile attack on the US, its deployed forces or its allies. SBIRS will incorporate new technologies to enhance detection; improve reporting of ICBM, SLBM and tactical ballistic missiles; and provide critical mid-course tracking and discrimination data for national and theater missile defense. This system will provide increased performance in order to meet requirements in US Space Command's Capstone Requirements Document and Operations Requirements Document. SBIRS will consist of satellites in Geosynchronous Orbits (GEO), Highly Elliptical Orbits (HEO) and Low Earth Orbits (LEO) and an integrated centralized ground station serving all SBIRS space elements and Defense Support Program (DSP) satellites. This PE funds the SBIRS Low Program Definition Risk Reduction (PDRR) activities and leads to Engineering , Manufacturing and Development (EMD). SBIRS Low is the LEO component of SBIRS.</p> <p>(U) <u>FY 1999 (\$ in Thousands)</u></p> <p>(U) \$32,000 PDRR</p> <p>(U) \$4,535 Radiation Hardened Parts</p> <p>(U) \$92 Program Office Activities</p> <p>(U) \$36,627 Total</p> <p>(U) <u>FY 2000 (\$ in Thousands)</u></p> <p>(U) \$162,000 PDRR</p> <p>(U) \$27,401 Program Definition Support (Includes studies, integration into SBIRS Increment System-of-Systems and modeling and simulation)</p> <p>(U) \$15,565 Other risk reduction activities (Includes cryocoolers, batteries, and phenomenology(ie. physics behind target signatures))</p> <p>(U) \$16,500 Program Office activities</p> <p>(U) \$3,000 Radiation Hardened Parts</p> <p>(U) \$1,100 Reprogrammed to PE 35911F to support DSP Flight-23 EELV Integration (not yet reflected in database)</p> <p>(U) \$225,566 Total</p>									
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(U) **A. Mission Description Continued**

(U) **FY 2001 (\$ in Thousands)**

(U) \$172,000	PDRR
(U) \$34,651	Program Definition Support (Includes studies, integration into SBIRS Increment 3 System-of-Systems and modeling and simulation)
(U) \$3,000	Radiation Hardened Parts
(U) \$12,370	Other Risk Reduction Activities (Includes cryocoolers, batteries and phenomenology)
(U) \$19,000	Program Office Activities
(U) \$241,021	Total

(U) **B. Budget Activity Justification**

(U) This Program Element is in Budget Activity 5, EMD because it funds Program Definition efforts including initial system design and EMD activities for the LEO portion of the SBIRS program

(U) **C. Program Change Summary (\$ in Thousands)**

	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>Total Cost</u>
(U) Previous President's Budget (FY 2000 PBR)	33,218	77,651	147,933	2,892,305
(U) Appropriated Value	33,328	229,029		
(U) Adjustments to Appropriated Value				
a. Congressional/General Reductions	-110	-150		
b. Small Business Innovative Research	-1,020			
c. Omnibus or Other Above Threshold Reprogram		-1,529		
d. Below Threshold Reprogram	4,634			
e. Rescissions	-205	-1,784		
f. Other				
(U) Adjustments to Budget Years Since FY 2000 PBR			93,088	298,950
(U) Current Budget Submit/FY 2001 PBR	36,627	225,566	241,021	3,191,255

(U) **Significant Program Changes:**

The Air Force terminated the SBIRS Low Flight demonstration programs in PE 63441F on 5 Feb 99. The funding originally intended for these efforts in FY00 and FY01 was transferred to PE 64442F to finance an expanded SBIRS Low PDRR effort leading to EMD. FY99 BTR for same purpose.

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(U) <u>D. Other Program Funding Summary (\$ in Thousands)</u>												
	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>Cost to</u>	<u>Total Cost</u>			
	<u>Actual</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Complete</u>				
(U) PE 35922F - SBIRS Low Production	0	0	0	0	33,100	101,400	325,105	Continuing	TBD			
(U) PE 63441F - SBIRS Low DEM/VAL	144,723	0	0	0	0	0	0	0	1,154,120			
(U) PE 64441 SBIRS High	508,473	420,476	569,188	389,879	196,841	128,871	100,856	356,475	3,492,030			
(U) PE 35915 - SBIRS	0	0	0	94,000	371,631	0	7,212	11,900	484,743			
(U) PE 35911 - DSP	13,971	7,361	11,462	6,418	6,697	0	0	0	1,923,990			
(U) <u>E. Acquisition Strategy</u>												
The SBIRS program is managed through a single consolidated System Program Office (SPO) at the Space and Missile Systems Center, Los Angeles Air Force Base, CA. SBIRS Low began PDRR activities in August 1999 with the award of two firm fixed price contracts. PDRR will be followed by a competitive contract award for EMD scheduled for award in the first quarter of FY03 with the deployment of the SBIRS Low satellites beginning in the fourth quarter of FY06.												
(U) <u>F. Schedule Profile</u>												
	<u>FY 1999</u>				<u>FY 2000</u>				<u>FY 2001</u>			
	1	2	3	4	1	2	3	4	1	2	3	4
(U) Program Definition Contract Award				*								
(U) System Requirements Review									X			
(U) Preliminary Design Review (2QFY02)												
(U) EMD Contract Award (1QFY03)												
(U) EMD Critical Design Review (3QFY03)												
(U) SBIRS Low First Launch (4QFY06)												
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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)							DATE February 2000			
BUDGET ACTIVITY 05 - Engineering and Manufacturing Development				PE NUMBER AND TITLE 0604442F Space Based Infrared Systems (SBIRS)				PROJECT 654598		
Low										
(U) <u>A. Project Cost Breakdown (\$ in Thousands)</u>										
					<u>FY 1999</u>		<u>FY 2000</u>		<u>FY 2001</u>	
(U)	Program Definition				32,000		162,000		172,000	
(U)	Radiation Hardened Parts				4,535		3,000		3,000	
(U)	Program Definition Support				0		28,501		34,651	
(U)	Program Office Activities (FY99 funded in PE 63441F)				92		16,500		19,000	
(U)	Other Risk Reduction Activities				0		15,565		12,370	
(U)	Total				36,627		225,566		241,021	
(U) <u>B. Budget Acquisition History and Planning Information (\$ in Thousands)</u>										
(U) <u>Performing Organizations:</u>										
	<u>Contractor or</u>	<u>Contract</u>								
	<u>Government</u>	<u>Method/Type</u>	<u>Award or</u>	<u>Performing</u>	<u>Project</u>					
	<u>Performing</u>	<u>or Funding</u>	<u>Obligation</u>	<u>Activity</u>	<u>Office</u>	<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>
	<u>Activity</u>	<u>Vehicle</u>	<u>Date</u>	<u>EAC</u>	<u>EAC</u>	<u>to FY 1999</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>Complete</u>
	<u>Product Development Organizations</u>									
	TRW	FFP	Aug 99			0	16,000	81,000	86,000	92,000
	Spectrum Astro	FFP	Aug 99			0	16,000	81,000	86,000	92,000
	EMD					0	0	0	0	1,885,850
	PDRR Support	Various	Various			0	0	28,501	34,651	432,371
	Other Risk Reduction Act	Various	Various				0	15,565	12,370	11,240
	Rad Hard Parts	Various	Aug 99			0	4,535	3,000	3,000	6,000
	<u>Support and Management Organizations</u>									
	Program Support	Various	Various	N/A	N/A	0	92	16,500	19,000	168,580
	<u>Test and Evaluation Organizations</u>									
	Not Applicable									

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BUDGET ACTIVITY				PE NUMBER AND TITLE			PROJECT	
05 - Engineering and Manufacturing Development				0604442F Space Based Infrared Systems (SBIRS)			654598	
				Low				
(U) Government Furnished Property:								
	<u>Contract</u>							
	<u>Method/Type</u>	<u>Award or</u>						
<u>Item</u>	<u>or Funding</u>	<u>Obligation</u>	<u>Delivery</u>	<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>
<u>Description</u>	<u>Vehicle</u>	<u>Date</u>	<u>Date</u>	<u>to FY 1999</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>Complete</u>
<u>Product Development Property</u>								
Not Applicable								
<u>Support and Management Property</u>								
Not Applicable								
<u>Test and Evaluation Property</u>								
Not Applicable								
				<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>
				<u>to FY 1999</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>Complete</u>
<u>Subtotals</u>								<u>Total</u>
BTR to 35911F								<u>Program</u>
Subtotal Product Development				0	36,535	209,066	222,021	2,519,461
Subtotal Support and Management				0	92	16,500	19,000	168,580
Subtotal Test and Evaluation								
Total Project				0	36,627	225,566	241,021	2,688,041
								3,191,255

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